

CO-GENERATION TURBOCHARGED TURBINE SYSTEM

5

ABSTRACT OF THE DISCLOSURE

A co-generation turbocharged turbine system that utilizes a gas turbine (10) connecting the exhaust to a turbocharger (24) to introduce pressurized air into the inlet of the turbine for improving power and efficiency. A second embodiment places a work load (22) on an extension of the same power shaft (30), thereby connecting both the turbocharger driven rotor and drive rotor together in the form of an extended power shaft (30'). The turbocharger is in fluid communication from the gas turbine exhaust and is connected to the gas turbine air intake from the drive rotor of the turbocharger. A third embodiment consists of the same elements as the second embodiment except the work load (34) is driven by a turbocharger double-extended power shaft (30'') which extends from a vapor generating sub-system that has been added to the invention. The vapor generating sub-system consists of a vapor generator (36), a vapor driven turbine (38) and a condenser (40) which utilizes the exhaust from the turbocharger, thus converting it to energy as a form of work using the vapor driven turbine.